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Tuberculous Lymphadenitis: A Rare Case Report of Extrapulmonary Involvement

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Dr. Paramjit
(Demonstrator)
Dr. Seema Aggarwal
(Post graduate student)
Dr. Jeevan Lata
(Principal, Professor & the Head)
Department of Oral & Maxillofacial Surgery, Government Dental College and Hospital
Amritsar, Punjab, **India**
Dr. Sanjeev Kumar Salaria
(Professor & the Head)
Department of Periodontology, Surendera Dental College& Research Institute
Sriganganagar, Rajasthan, India

Abstract:

Tuberculosis (TB) is a systemic bacterial infectious disease caused frequently by Mycobacterium TB and spread worldwide. It is highly prevalent among men than women and infects all parts of the oral cavity; may appear predominantly in the form of ulcerative lesions. It was found as primary or secondary infection in 42% and 58% (54% pulmonary, 4% extrapulmonary) of patients respectively. In patients sometimes an oral manifestation of TB has led to the diagnosis of a previously unknown systemic infection, which resulted in a timely and effective treatment. The present report describes a rare case of an early diagnosis of extra-pulmonary tuberculous lymphadenitis in 30-year-old male patient reported in the dental outpatient department with a complaint of painful swelling in his left submandibular region with decayed teeth which completely recovered after directly observed therapy (DOT) for TB without any complication.

Keywords:	*Extra-Pulmonary Tuberculosis, Lymphadenitis, Mycobacterium TB, Directly Observed Therapy*
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1. Introduction

Tuberculosis (TB) is a chronic granulomatous infection principally caused by Mycobacterium TB, Gram-positive, acid-fast, aerobic bacillus and less frequently by ingestion of Mycobacterium bovis infected unpasteurized cow's milk or by other atypical mycobacteria.[1] TB is a worldwide health concern. Every year about 8 million people develop TB and 3 million dies of complications associated with the disease.[2,3]

TB may present in concurrence with a focus on the lungs (Primary) or may present primarily without pulmonary involvement (EPTB) in head and neck region. EPTB occurs in about 0.5-5% of TB patients,[1] and

due to the absence of systemic signs and symptoms of the disease/due to non-specific clinical presentation/ may be due to EPTB rarely features in the differential diagnosis of disease of head and neck lesions which may cause difficulties in diagnosis and result in a delay in instituting treatment.

The present report describes early diagnosis of EPTB in otherwise systemically healthy patient reported to the institutional outpatient department of oral and maxillofacial surgery with the chief complaint of painful swelling in his left submandibular region with grossly decayed #37,38 followed by referral consultation and recovered without complications after DOT for TB.

2. Case Report

A 30-year male patient reported to the Institutional outpatient department of Oral and maxillofacial surgery with a complaint of a painful swelling in his left submandibular region that had been present for two months. The swelling was initially of a peanut size and gradually increased to reach present size. Past dental history revealed pus discharge secondary to the decayed tooth in the left lower back tooth 2 months back, for which he consulted his family dentist and took medication as prescribed but the swelling was not reduced. On general physical examination the patient was calm, conscious and well oriented to place and time with the normal build; without any history of fever, cough, or weight loss. Vitals are normal.

On extraoral examination: the face was asymmetrical with a single diffuse swelling with ill-defined borders of approximately 3x3 cm in the left submandibular region without any color differentiation from the adjacent skin (Figure 1). On palpation, a nodular mass was felt in the left submandibular region, which was firm in consistency, tender, non-fluctuant, non-compressible, mobile, and showed signs of matting. Left submandibular lymph nodes were palpable.

On intraoral examination, left mandibular second and third molars (#37, 38) were grossly decayed (Figure 2). A panoramic radiograph was taken, revealed radiolucency in the left mandibular region with the involvement of #37, 38 (Figure 3). All routine investigations were within the normal limits except erythrocyte sedimentation rate 22nm/hr. Initially, it was considered to be a case of long-standing chronic inflammation associated lymphadenitis with respect to #37-38. So following aseptic surgical protocol, under local anesthesia extraction of #37,38 carried out and prophylactic antibiotics continuous for 5days. Even, when after 7 days postoperatively swelling did not resolve.

A provisional diagnosis of TB Lymphadenitis was suggested, and Mantoux test and x-ray chest advised. Mantoux test was reported as positive whereas no abnormality detected in X-ray Chest (Figure 4). A provisional diagnosis of extra-pulmonary left submandibular tuberculous lymphadenitis was made which was further reconfirmed by Fine-needle aspiration cytology (FNAC); cellular aspirate showed plenty of small and large lymphocytes. Necrotic debris was seen in focal areas, and few epithelioid cells or langhan's giant cells seen. Caseation like necrotic material was also noticeable. ZN stained smear was highly positive for acid-fast bacilli (Figure 5) suggestive of TB.

The patient was referred to the Chest and TB Specialist for further treatment. Treatment consisted of anti-TB drugs (DOT) for a period of 6 months. The patient was reported to be highly satisfied with the outcome as with the start of anti-TB drugs

swelling start decreasing gradually in size and disappeared within a period of 3 months without any complication (Figure 6). Patient completed the DOT treatment.

3. Discussion

TB is a multisystem disease with myriad presentations and manifestations; it can affect any organ or tissue, excluding only the hair and nails.[4] Yearly nearly 2.2million individuals acquire TB in India of which approximately0.87 million are infectious cases and responsible for about more than 330,000 per annum.[5]

The diagnosis of primary EPTB in our patient was an enigma because when an otherwise healthy patient without any bad habits (Tobacco/smoking etc.) reported with grossly decayed teeth associated extraoral swelling with pain. It is clear that the clinical suspicion should remain focused on lymphadenitis of odontogenic origin, and treated with antibiotics and eventually extraction without improvement which is consistent with the report of Wang et al.[6]

As EPTB commonly found in the submental and submandibular lymph nodes as well as the salivary glands in the neck region as cited in the report of wang et al [6] ; symptoms may include an obvious mass or lesion with local pain, swelling, and occasionally fistula formation; [7] similar findings observed in present case too. Therefore, the consultant suggested that TB lymphadenitis be considered and necessary investigation (Mantoux, FNAC, X-ray chest) carried out and confirmed the diagnosis at the earliest by FNAC and immediately referral consultation started the treatment.

The basic principle for the treatment of pulmonary TB applies to EPTB too. For TB at any stage, a 6-9 months course of treatment regimen that includes INH & RIF is recommended,[8]]and patient treated according to DOT for tuberculosis which includes initial intensive AND continuation phase for eight and sixteen weeks of the drugs Isoniazid (H), Rifampicin (R), Pyrazinamide (Z) and Ethambutol (E) three drugs Isoniazid, Rifampicin and Ethambutol gave respectively and recovered; outcome achieved in the present case is inconsistent with the report of Hegde et al.[5]

4. Conclusion

Nature of TB either pulmonary or EPTB does not matter, it is the early detection, diagnosis and treatment which is most important; and that play an important role in present case recovery too, due to the awareness of consultant oral surgeon regarding such type of atypical presentation TB. So, it is suggested that oral clinician should consider TB in the differential diagnosis of such lesion.

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Figures & Legends:

Figure 1: Clinical picture showing a single diffuse swelling with ill-defined borders of approximately 3x3 cm in the left submandibular region without any color differentiation from the adjacent skin.

Figure 2: Intraoral clinical picture showing grossly decayed left mandibular second and third molars (#37, 38)

Figure 3: OPG showing radiolucency in the left mandibular region with the involvement of #37, 38.

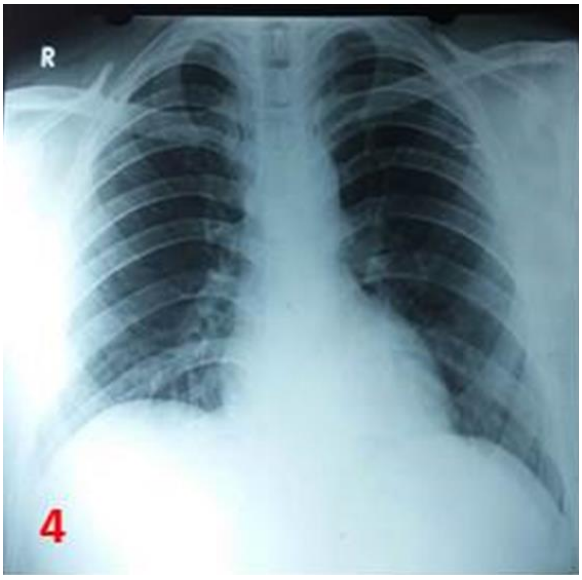

Figure 4: Radiograph of Chest didn't reveal any abnormality

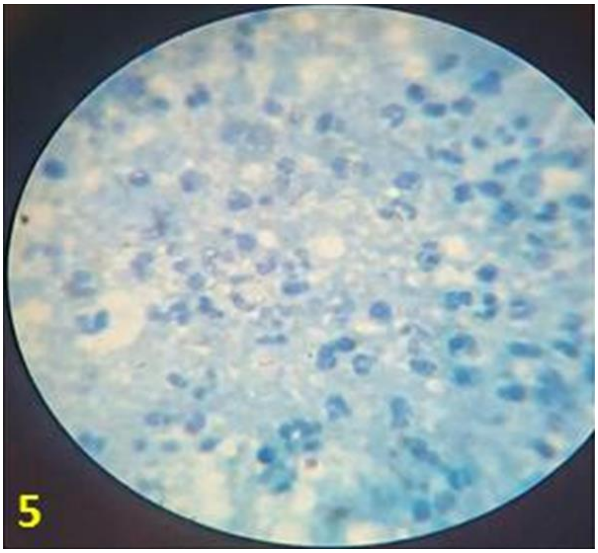

Figure 5: Fine-needle aspiration cytology (FNAC) smear showing acid-fast bacilli with ZN stain

Figure 6: Follow-up picture showing regression of left mandibular swelling after treatment